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An abstract of a study designed to test the effect of orientation meetings on the grade points of 180 male freshmen with a predicted grade-point average below 2.10 on a 4-point scale—60 in a control group, 60 in a student-centered experimental group, and 60 in a more structured experimental group. The unstructured group discussed topics of immediate concern to themselves and the structured group received orientation preplanned by the author. The author evaluated the findings as seeming to indicate that the student-centered method of orientation was superior to the leader-planned in enhancing academic achievement and that either method is superior to no program of concentrated orientation.

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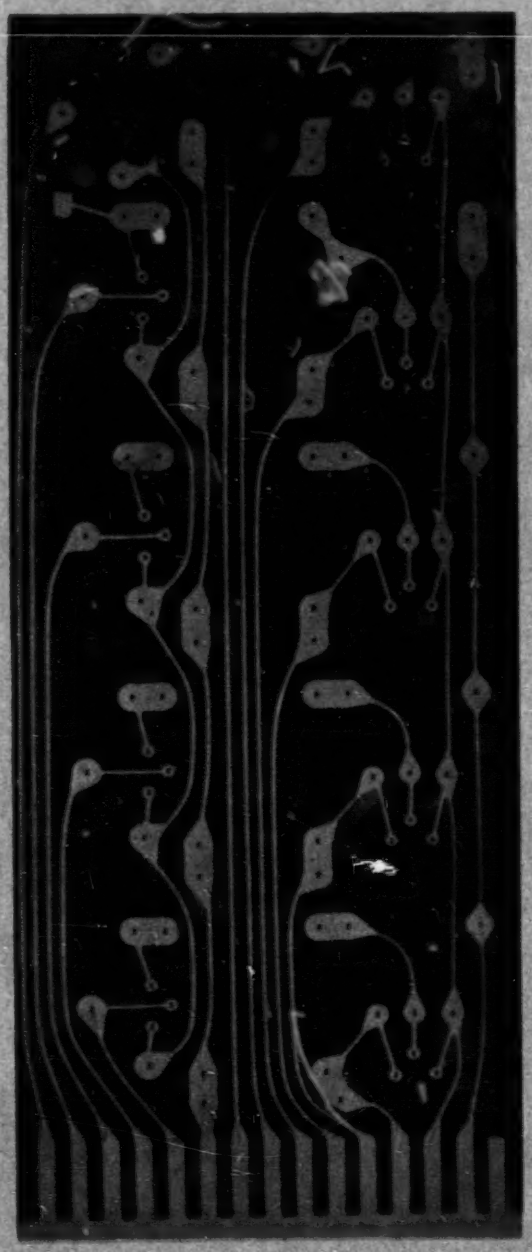

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THE EDUCATION OF WOMEN ELEMENTARY TEACHERS IN RELATION TO THEIR ROLE IN SOCIETY

--George D. Weiss

The study focused attention upon the life pattern followed by women elementary teachers who graduated from the State College, Kutztown, Pennsylvania. It also sought to ascertain the implications of the findings for the curriculum for women elementary teachers in the light of their needs as wives and mothers, teachers, and citizens.

Questionnaires were sent to 686 women who graduated from 1945 to 1957 inclusive. Depth interviews were also held with 56 graduates who had returned completed questionnaires.

The date revealed that the pattern of life included marriage for 79.8 per cent of the graduates. Almost all of them had married within five years of graduation. Slightly more than 75 per cent of them had from one to six children. Eighty per cent of those who had no children were teaching. Those who had one or more children tended to assume full-time home responsibilities. The 80 unmarried graduates had been employed as teachers during 99.4 per cent of the time since graduation. The average period of years in the child-bearing span was 3.2 years and ranged from one to twelve years.

At the time of the survey 41 per cent of the married women, 98.8 per cent of the single women, and 75 per cent of the widowed, separated or divorced were employed; virtually 100 per cent as teachers.

The data indicated that little effort is being made by the married-not employed women to maintain or improve professional skills.

In general, the data seemed to indicate adequacy of preparation for personal and professional needs but only moderate adequacy for participation in community affairs.

Suggestions for improvement of the program included:

(a) Study of the problems of family life.

(b) More emphasis upon pre-student teaching experiencewith children.

(c) Experimentation with various forms of student teaching arrangements prior to the senior year.

(d) Elimination of overlapping repetition in education courses as well as inadequate coverage of some professional areas.

Only 8.6 per cent of the women seemed to be concerned about the disadvantages of women in competition with man for the some position.

Plans for the future indicated rather strongly that those who were employed, both married and single women, were satisfied to continue as classroom teachers rather than seek advancement in the profession.

COMENIAN PEDAGOGY AND THE MORAVIAN SCHOOL CURRICULUM

(1740-1850)

--Jerome K. Clauser

Early educational efforts in Pennsylvania were generally sectarian in nature. Among the educationally prominent religious groups in eastern Pennsylvania were the Moravians, a religious denomination that traced its origins back to the teachings of John Hus in the fifteenth century.

Undoubtedly the best known Moravian educator was John Amos Comenius (1592-1670). Known throughout Europe as a leading educator of his day, his pedagogical writings anticipated modern practices by at least two centuries. The purpose of this study was to determine whether or not, and if so, to what extent, the Moravian school curriculum in eastern Pennsylvania was comparable to the educational tenets formulated by the earlier Moravian educator and bishop, John Amos Comenius.

The method used in this study involved isolating from his many pedagogical works those educational tenets which might be said to constitute the philosophy of education of Comenius. A similar isolation of those characteristics which in toto set apart Moravian schools from other schools of the periods was also made from first and second hand accounts of Moravian schools. Finally, a comparison was made between aims and practices and Moravian educational theory and practice.

Eight characteristics of the Moravian schools in eastern Pennsylvania were found to have their precedent in the writings of Comenius. The characteristics included the following: (1) The basis of Moravian education was grounded on the religious faith of the denomination. (2) The Moravians showed a strong concern for the early education of youth. (3) Education was open to all. (4) A hierarchy of religious-educational institutions was organized to provide appropriate experiences for each age group. (5) The Moravian approach to discipline was characterized by a lack of coercion. (6) The fundamental processes with the addition of religious training and music constituted the more formal aspects of the curriculum. (7) The teacher served as both a "parent" and "pedagogue", especially in the boarding schools. (8) The Moravians recognized the need for and actually implemented a system of vocational training.

AN ANALYSIS OF THE RELATIONSHIP BETWEEN SELECTED PROGNOSTIC MEASURES AND ACHIEVEMENT IN THE FRESHMAN PROGRAM FOR SECRETARIAL MAJORS AT THE WOMAN'S COLLEGE OF THE UNIVERSITY OF NORTH CAROLINA

--Roscoe Jackson Allen

An initial list of factors influencing success in a secretarial program was prepared by the investigator and submitted to six members of the Department of Secretarial Studies at the University. The revised list was then sent to 70 North Carolina members of Zeta Chapter, Delta Pi Epsilon, national honor fraternity in business education, for an evaluation of the proposed factors. A final list of factors influencing success in a secretarial program with their proposed instrument so measurement was then submitted to a jury composed of five specialists in business education and three specialists in psychology.

Zero-order correlations, intercorrelations, a mutiple correlation, and a predictive formula was obtained by machine methods through the use of the UNIVAC 1105 Digital computer.

The variables significant at the 1 per cent level and their coefficients of correlation were: high-school average, .615; Scholastic Aptitude Test (Vergal), .397, Scholastic Test (Mathematical), .433; Scholastic Aptitude Test total, 1480; computational and clerical sections of the Kuder Preference Record--Vocational, .269 and .288 respectively; and the Maturity of Goals, Study Skills, Mental Health, Personal Relations, and the Total Scores on the College Inventory of Academic Adjustment, with respective correlations of .410, .313, .274, .172, and .420.

The combination of the high-school average, the total score on the Scholastic Aptitude Test, and the scores on the computational and clerical sections of the Kuder Preference Record-Vocational, resulted in a multiple correlation of .710.

From the results obtained in this study the following conclusions were drawn:

1. It appears that the most important factor necessary for success in the Department of Secretarial Studies at the Women's College of the University of North Carolina is success in high school as indicated by the grades received.

2. According to the present data, the total score on the Scholastic Aptitude Test is of greater predictive value than the individual score on either the Verbal or the Mathematical Tests.

3. The computational and clerical sections of the Kuder Preference Record-Vocational have value as predictive measures in the secretarial program at the College.

4. The College Inventory of Academic Adjustment has value as a diagnostic tool in determining the reasons for underachievement of students in the Department of Secretarial Studies at the college.

AN EXPERIMENTAL STUDY OF METHODS ADAPTED TO TEACHING
[illegible] WOMEN IN PHYSICAL EDUCATION

--Joan Nessler

The Problem

This study sought to compare the effects upon poorly-skilled college freshman girls of (1) participation in an eight-week specially designed skills course with (2) eight weeks of participation in the regular activity program at The Pennsylvania State University. The writer also investigated relative merits of the following two methods of teaching certain motor skills which seem to be basic to successful performance in a college physical education program:

1. Participation in a skills course in which students played elementary games which stressed the skills of throwing, catching, running, dodging, and changing direction, jumping, kicking, striking, and using a striking implement.

2. Participation in a skills course consisting of isolated skill-practice, analysis, and presentation of mechanical principles related to the specific skills of throwing, catching, running, dodging, and changing direction, jumping, kicking, striking, and using a striking implement.

Conclusions

1. Participation in an eight-week activity course specially adapted to the needs of poorly-skilled freshman women is more advantageous to the low-skilled students than participation in the regular activities program.

2. If the criterion of efficacy of the activity course is improvement of attitudes toward physical education and a better score on tests of selected motor skills, a course in which there is isolated skill-practice, accompanied by analysis and presentation of mechanical principles related to the motor skills is more effective than a skills course in which students participate in a variety of elementary-level games incorporating the fundamental skills. Both types of skills courses are superior to participation in the regular activity program.

3. Achievement in complex-skill-patterns does not necessairly result from improved ability in the specific isolated skills which make up the pattern. In other words, there are other factors which affect the integration of the fundamental skills into complex skill-patterns (such as necessiated in badmiton).

RELATIONSHIP OF QUANTITY AND DISTRIBUTION OF PRACTICE TO ENDURANCE, SPEED, AND SKILL DEVELOPMENT BY BEGINNERS

--G. Alan Stull

PROCEDURES. The study was divided into two phases--a swimming experiment and a bowling experiment. Swimming was selected for the first activity because it involved edurance as well as skill, beginners were available, and quantitative measurement was feasible. In the second phase of the experiment, another activity, namely bowling, was studied for six additional weeks. The endurance aspect seemed to have been clarified by the available data and the first phase of this experiment.

The swimming experiment lasted six weeks, and all practice periods were of one-hour duration. In order that the investigator could carefully control the exacting kind of strenuous practice which is necessary in a study of this nature, the subjects were limited to twenty-four boys ranging in age from eight and one-half to thirteen years. All subjects had five hours of practice by the end of the first week, and they then assigned to groups according to equating procedure. One group practiced three times per week and the other group, six. Swimming ability was measured by (1) the speed of swimming thirty-five feet, and (2) the distance swum in an endurance test. The following speed and distance tests were administered during the swimming experiment: (1) an equating test after the first week of practice, (2) a mid-test two and one-half weeks after the equating test, and (3) a final test at the conclusion of the experimental period.

Forty-six freshman and sophomore students were divided into two equated groups. One group bowled three games per week and the other six. The subject's bowling score for each game was taken as the measure of his bowling skill at the particular time in the experiment.

CONCLUSIONS. Within the limits of this study, the following conclusions appear justified:

1. In the development of endurance in swimming by beginners, there appears to be a definite advantage in hourly practices three days per week as contrasted to six when the total amount of practice time is held constant; and when practice is continued over the same total time span, there does not seem to be any significant advantage for endurance development in the doubling of practice time instead of three times per week.

2. For the acquistion of swimming speed or bowling skill by beginners, it appears that practice six times per week is at least as effective (and probably more effective) than practice three times per week, even if the total amount of practice time is held constant; and that a doubling of practice time, by use of this increased frequency over the same total time span, produces considerably greater skill.

INTERPERSONAL RELATIONSHIPS ASSOCIATED WITH TWO EDUCATIONAL EXPERIENCES OF COLLEGE HOME ECONOMICS EDUCATION STUDENTS

--Ellen M. Champoux

This study was concerned with the development of a rating instrument using the Q-technique which would determine the relative positions of individuals on an interpersonal relationships continuum. Further, this study was made to determine whether changes in score on this instrument might be associated with certain educational experiences.

Fifty home economics education students enrolled in the College of Home Economics at The Pennsylvania State University during the Fall Semester of 1960 participated in this study. The twenty-eight sophomore students enrolled in the beginning course in the professional education sequence were selected because of the emphasis given in the course to adolescent development. The twenty-two senior students enrolled in the culminating course in the professional education sequence in home economics were selected because of the emphasis in the course placed on activity based on the democratic process.

The Interpersonal Relationships Inventory (IRI), the Q-sort developed for this study, was composed of fifty positively and negatively toned self-referent statements of attitudes, beliefs, values, or behaviors, associated with the person skilled in social interaction. Validity of the IRI was established by selection of statements from relevant literature, by jury agreement on the validity of the conceptual structure of the Q-sort items, and by item analysis. Reliability of the instrument in the unforced-sort form, determined by the Spearman-Brown formula, was .90 (.79; N=50), although lower, remained constant over a period of sixteen weeks. The range of scores, means, and standard deviations demonstrated that the IRI had the capacity to discriminate among students in a given population.

The findings did not support the hypothesis predicting that skill in interpersonal relationships as insurred by the IRI (1) would be associated with educational experience planned to impart knowledge and understanding of adolescent development or planned for participation in activities based on the democratic process or (2) would be associated with college level.

FACTORS AFFECTING STUDENTS' PERFORMANCE IN AN AUDIO-VISUAL COURSE

--Charles M. Hill

This investigation was undertaken to determine the inter-relationships of certain factors as they affected both student performance in an audio-visual course and student responsed to instruments designed to predict success in teaching.

The population of the study consisted of junior and senior students at The Pennsylvania State University who were enrolled in the basic audio-visual course offered during the fall of 1960.

The students were taught the course content by four patterns: (1) traditional classrcom method, (2) self study method, (3) an intergration of the audio-visual course with general and subject method courses, and (4) a combination with the student teaching experience. Pre and post measures were given on information, concepts, attitudes and laboratory knowledge pertinent to the audio-visual course. A laboratory preformance test was given at the completion of the course. The students' cumulative grade point averages (scholastic achievement) were obtained from the University records. These averages included all of their grades up to the end of the spring semester 1960.

Conclusions based on the analyses of data revealed the following:

1. The students' sex was significantly related to their over-all performance. Specifically, the females did significantly better on all measures, except on equipment operation.

2. The students' curriculum was not significantly related to their over-all performance in the audio-visual course except for the performance of the secondary students on the information test.

3. The students with scholastic achievement above the mean scholastic achievement of the total population may be expected to perform significantly better than those students below the mean.

4. The methods bywhich the students were taught the audio-visual course were significantly related to specific parts of the course but not to over-all performance in the course.

5. The instrument, designed by W. H. Jarecke, used with students in the secondary curriculum, was significantly related to the measures of the audio-visual course, the sex of the students, and their scholastic achievement. The White test used with elementary curriculum students was not related significantly to the experimental measures.

6. The students' sex and scholastic achievement may be used to predict their over-all performance in the audio-visual course.

7. The performance in the course of the students enrolled in the secondary curriculum may be used to predict their responses to general teaching situations which were contained in Jacecke's instrument.

ISOLATION OF A SUCCESS FACTOR FOR STUDENTS TAKING INSTRUCTION IN AUDIO-VISUAL METHODS

--Matthew H. Bruce, Jr.

The primary purpose was the confirmation of the existence of a factor representing success in the basic audio-visual course, employing the method of factor analysis. The startling point for this analysis was the matrix of intercorrelations resulting from the administration over a period of three semesters of a battery of tests used in an experimental project in audio-visual instruction under the direction of G. M. Torkelson of the Pennsylvania State University. The population consisted of junior, and senior students enrolled in the basic audio-visual course during the spring 1960, fall 1960, and spring 1961 semesters.

A second phase of the investigation was the establishment of a "success" criterion based on the results of the factor analysis, and the use of this criterion in regression calculations to determine predictive values of pre-tests used in the parent project.

After the preliminary calculations indicated the feasibility of continuing, a factor analysis of the complete centroid type was performed, resulting in three uniquely determined factors, according to established criteria. These factors were: a general academic achievement or intellectual factor, a mechanical-spatial factor, and the hoped-for A-V success factor. Two additional factors or influences were found to be related and small through elimination in the process of rotation of the factor loading matrices.

A criterion variable was formulated by weighting post-test scores on a basis of the ratio of variance extracted on three variables by the factor felt to fit the description of a course success factor. Regressions were performed on each of the pre-test variables indicated as being possibly related to the success factor.

Conclusions based on the analyses of data indicated the following:

1. There appears to exist a factor which is representative of success in the basic audio-visual course, as measured by certain of the variables employed in the parent project.

2. The variance extranced by this factor, along with the other two uniquely determined factors, is relatively consistent from semester to semester, and thus forms a suitable basis for the formulation of a criterion of success.

CLASSROOM TYPE TELEVISION PROGRAMS A VARIABLE IN THE PUBLIC RELATIONS ACTIVITY OF A PENNSYLVANIA SECOND-CLASS PUBLIC SCHOOL DISTRICT

--Friedrich Herman Furrer

Statement of the Problem

This investigation's problem was to determine the effectiveness of classroom type programs, broadcast by a commercial television station, as a public relations activity of a selected Pennsylvania second-class school district.

Procedure

A null hypothesis, classroom type programs are not effective as a public relations activity for the selected school district, was used to solve the problem. Five criteria were selected as indicators of the programs' effectiveness: (1) the programs' popularity; (2) its instructional efficiency; (3) its ability to interpret the institution's purpose; (4) ability to influence the public favorably; (5) ability to inspire public action. Effectiveness in a majority of these criteria refuted the hypothesis. Effectiveness of a criterion was gained by comparing the opinions of the viewers with those of the non-viewers. These opinions were obtained by a questionnaire which classified the respondents as to sex, income, education, possession of children, and P. T. A. attendance. Appropriate statistics evaluated the finding of each criterion.

Conclusion

The television programs proved effective as a public relations activity in a majority (4 out of 5) of the criteria:

1. The television programs are effective in relation to the program popularity. The programs were viewed by the greater per cent of the population in the random sample.

2. The television programs were not effective in relation to the instructional efficiency. The viewers did not score significantly higher than non-viewers when tested in relation to programs' instruction concerning objectives of the social studies.

3. The television programs were effective in relation to the interpretation of institution's purpose. A greater per cent of viewers designated the school's purpose as training for citizenship.

4. The television programs were effective in relation to influencing the public favorably. The majority of viewers wanted the programs continued.

5. The television programs were effective in relation to inspiring the public to action. Approximately sixteen per cent of the viewers attending P. T. A. admitted their attendance was influenced by viewing the programs.

AN ANALYSIS OF HIGH SCHOOL CHEMISTRY TEACHERS' ATTITUDES TOWARD AND EMPHASIS ON CERTAIN CONTEMPORARY TOPICS IN CHEMISTRY

--Benjamin Charles Friedrich

With the help, in part, of several persons associated with the development of the Chemical Bond Approach to high school chemistry a list of contemporary topics in chemistry was prepared.

The final list of thirty-nine topics was submitted to a sample of Pennsylvania high school chemistry teachers.

Replies from 312 teachers indicates that the teachers felt that the topics, as a group, should be accorded to something between minor and moderate emphasis. Currently, however, the topics are receiving less than minor emphasis. From these findings it is concluded the high school chemistry, as it is now taught in Pennsylvania, is still essentially traditional in its approach.

A double classification analysis of variance with correction for disproportionality (method of R. A. Patterson) was used to investigate relationships between six factors in the background of the teachers and the teachers' attitudes toward inclusion of the several topics in a modern high school chemistry program. In every analysis, bias resulting from the teachers' subjective feeling of adequacy to present the topic, without additional training, was controlled by the double classification design of the analysis of variance.

As a result of the analyses the following conclusions were reached:

1. There is a highly significant relationship between feelings of adequacy and teacher attitudes toward inclusion of contemporary topics in a modern high school chemistry course. Teachers who feel competent to present the topics without additional training favor giving the topics slightly more than moderate emphasis. Teachers who do not feel competent favor giving rather less than minor emphasis to the topics.

2. No significant relationship exists between favorable attitudes and the undergraduate subject matter major of the teacher.

3. No significant relationship exists, in general, between favorable attitudes and the total semester hours of credit earned in chemistry by the teacher.

4. A significant to highly significant relationship exists between participation in a National Science Foundation Institute and favorable attitudes toward six of the contemporary topics in chemistry.

5. No significant relationship exists, in general between favorable attitudes and years of teaching experience. Where relationships do exist, the nature of the relationship is not entirely clear.

ABILITIES AND CHARACTERISTICS OF YOUNG ADULT DAIRY FARMERS IN PENNSYLVANIA WHICH ARE ASSOCIATED WITH SUCCESSFUL FARM MANAGEMENT

--Everett D. Edington

The characterisitcs studies wer (1) knowledge of farm management and measured by a score on a Farm Management Test, (2) mechanical aptitude as measured by the DAT Mechanical Aptitude Test, (3) clerical aptitude as measured by the Minnesota Clerical Aptitude Test, (4) score on an Approved Practice Rating Scale, (5) score on a Community Participation Scale, (6) age, (7) years of formal schooling, (8) years in high school vocational agriculture, (9) years in 4-H club work and (10) years in young adult farmer class work.

In twelve randomly chosen multiple teacher departments and twelve randomly chosen single teacher departments of vocational agriculture, the young adult dairy farmers enrolled in classes and receiving on-farm instruction were classified according to level of instruction, high or low number of hours, and scope of responsibility, high or low involvement in the management of the farm business. The dairy farmers in each department were divided into groups with either high or low scope of responsibility and either high or low levles of instruction.

There were no significant differences in the means of the five cirterion measures between the farmers who attended multiple teacher departments and those who attended single teacher departments of vocational agriculture. The same was true between the high and low levels of instruction. the means for the farmers with high scope of measures. The farmers with high scope of responsibility sold 240,690 pounds of milk per farm operator compared with 159,890 pounds sold by men in the low responsibility group. Similarly, the standard scores were for dairy efficiency 51.78 and 48.22, for crop production 52.52 and 48.33, and for labor efficiency 52.09 and 48.22. The high responsibility farmers had an average net farm income of $3,620 compared to $2299 for the low responsibility group.

Score on the Farm Mangement Test, score on Approved Practice Rating Scale and years as a 4-H member correlated significantly with each of the five criterion measures of success. (r values from.19 to .45) Community Participation correlated with all except crop production. Years of formal schooling correlated with pounds of milk sold per farm operator, daily efficiency and crop production. Mechanical aptitude correlated with pounds of milk sold per farm operator and labor efficiency.

DETERMINATION OF BASIC LEARNING IN GRAPHIC REPRESENTATIONS ESSENTIAL TO EMPLOYEE ADAPTATION IN PRODUCTION INDUSTRIES

--Paul W. De Vore

The basic problem of the research was to determine from the experience of supervisory personnel and production workers in selected production industries in the Commonwealth of Pennsylvania, those areas of graphic representations most useful in adapting to employment changes resulting from technological innovations.

Research was conducted by use of a structured interview employing a series of twenty-one interview cards displaying basic types of graphic representations or types of mechanical drawings. The results of the study were based on one hundred and forty one-hour interviews. Twenty-eight different industries selected from thirteen Department of Commerce Industrial Classifications cooperated by permitting interviews of five personnel classifications. The personnel classifications included unskilled, semi-skilled and skilled production workers and supervisory personnel classified as production foremen and training directors.

Conclusions: The results of the study were based on statistical analysis of data from one hundred and forty structured interviews.

The main conclusions reached by the research were:

A. that a definite hierarchy of usefulness was discovered, for both present employment and training, in the investigation of twenty-one classifications of graphic representations.

B. that graphic representations determined useful for adaptation and training in the industries investigated were those determined as basic to job performance during present employment.

C. that a common base of graphic representations were determined to exist among the diverse production industries investigated and that a "true" rank order of graphic representations for both present employment and training existed for each skill level.

D. that a greater similarity than difference existed between the selection of graphic representations for various skill levels for both present employment and training.

E. that a definite difference existed in the determined usefulness of graphic representations for each skill level investigated and that the higher the skill level the greater the established usefulness of selected graphic representations for both present employment and training.

F. that the results of the present research established, for all respondent categories, no significant difference in the need or use of graphic representations by skill levels during training versus present employment.

G. that the results of the present research indicated that a tendency existed in the skilled production worker category to select graphic representations as being more useful for present employment than for training, and

H. that a significant difference was established, by the unskilled production worker category, favoring the usefulness of graphic representations for training versus present employment.

THE PROJECTION OF A CURRICULUM FOR JUNIOR HIGH SCHOOL GENERAL MUSIC CLASSES, BASED ON AN ESTIMATE OF CONSUMER NEEDS IN CUMBERLAND COUNTY, PENNSYLVANIA

--Arnold Jessee Bauer

The major problem of the study was to identify in-school experiences with music considered to be needed and useful by (1) the majority of persons who have, or will have, received terminal instruction in music through junior high school general music classes, and (2) those who are not, and are not likely to become, professional musicians.

A questionnaire was constructed, in part, by a free inquiry technique, a technique designed to elicit a free response and therebyobtain a list of questionnaire items not suggested by the investigator. The list of items obtained in this manner was complemented by items obtained from professional sources. Three thousand questionnaires were distributed; returns were submitted by 1, 481 student and 487 adult residents of Cumberland County, Pennsylvania. Responses to questionnaire items were also submitted by a panel of ten authoritative music educators.

Analysis of data revealed that a majority of students and adults, identified as consumers of music, feel that the curriculum should help pupils, (1) learn to sing on pitch, (2) to perform music in its intended spirit (3) to sing from memory songs useful for group singing, (4) to sing in harmony, (5) to purchase and care for an instrument, (6) to learn popular dances, (7) to learn the fundamentals of music reading and to sight-read simple music, (8) to distinguish between good and poor music; good and poor performances, (9) to enjoy and appreciate music, (10) to feel success as a listener, singer, or player, (11) to use music for greater enjoyment of leisure time, (12) to select suitable music for special occasions, (13) to choose records wisely, and (14) as parents, to bring up children to enjoy good music.

The panel of music educators, unlike the majority of consumers, feel that the curriculum additionally should help pupils learn about (1) the instruments and instrumental groups, (2) music history, (3) opportunities in community musical activities, (4) available literature concerning musical matters, (5) the boy's changing voice, (6) composers, (7) jazz, opera, and music of Broadway and Hollywood, (8) the importance and value of music as an art, and (9) folk music.

Further analysis of data revealed (1) significant differences of preference for certain musical experiences exists between male and female students, and (2) a majority of Cumberland County residents feel that some areas of music education should be offered to pupils through the public schools.

IDENTIFICATION OF CRITICAL ELEMENTS ASSOCIATED WITH THE DEVELOPMENT OF EFFECTIVE STRING PROGRAMS IN PENNSYLVANIA PUBLIC SCHOOLS

--Bertha Neubert Maraffie

Questionnaires based upon a systematic survey of related literature and opinions of experienced music educators were evaluated on a rating scale by a jury of experts. The critical elements were evaluated according to their influential value in the development of effective string programs. Questionnaires were sent to 223 Second and Third Class School Districts in Pennsylvania. The rating scale and returned data determined whether a school district had an effective string program or a limited string program. An effective string program was considered to include certain string activities in elementary, junior high, and senior high schools: (1) instruction on stringed instruments; (2) string orchestras and school orchestras; and (3) school and public preformances.

Second Class School Districts. One critical element, the per pupil budget, i.e., the amount of money in the general school budget spent annually for the education of each pupil, differentiated between the string programs in school districts with effective string programs and those with limited string programs. The following critical elements did not differentiate between the string programs in districts with effective and those with limited string program: (1) fifty-three string program activities; (2) seventeen community opportunities for varied musical participation; (3) fifteen types of interested citizens who are musically influential; and (4) music budget's proportion of the general school budget.

Third Class School Districts. The following critical elements differentiated between the string programs in school districts with effective string programs and those with limited string programs: (1) fifty-three string programs activities; (2) fifteen types of musically influential citizens; and (3) the per pupil budget. Two critical elements did not differentiate between the string programs in districts with effective and those with limited string programs: (1) seventeen community opportunities for varied musical participation; and (2) music budget's proportion of the general school budget.

Second and Third Class School Districts. The summary of the ninth critical element, factors which appear to have an influence upon the development of string programs according to observations made by chief administrators, shows that the following factors were influential: (1) parents', students', teachers', administrators', and school directors' interest in developing and improving string programs; and (2) availability of competent certified string teachers and orchestra directors.

Few or no opportunities have been made available for interested students in Third Class Districts with limited string programs. Of these seventy-seven school districts, only 22 per cent had string teachers and orchestra directors on their music staffs. The chief administrators of these seventy-seven districts gave a "weak" rating to the "availability of competent certified string teachers and orchestra directors."

A VALIDATION OF CHILDREN'S BEHAVIORAL CATEGORIES BASED ON FEAR, AGAINST THE GUILFORD-ZIMMERMAN TEMPERAMENT SURVEY

--William T. Thom, 3rd

Behavioral Categories for Children. Robinson, Vitale, & Nitache (1961) proposed behavioral categories based on a child's perferred pattern of social interaction under emotional stress, especially as shown in the treatment hour in his handling of fear naturally aroused by a new relationship: The Actively Superficial Child (AE) denies feeling or discusses other topics. The Openly Antagnistic Child (CA) attacks, at least, verbally. The Actively Controlling Child (AC) manages things so as to avoid responding to others on their terms. The Passively Controlling Child (PC) limits his participation by doing nothing. The Passively Apprehensive Child (PA) is openly fearful. "Activity" and "passivity" refer not to physical activity, but to taking, or not taking, the social initative. "Control" refers neither to dominance as such, not to self-control, but to manipulation which keeps the child from having to respond to another's initiative.

Scope of the Study. Experimental testing of the categories in the clinic where they were developed would, where successful, encourage their use in treatment and research elsewhere, and where unsuccessful, show areas for futher refinement. Three aspects of the categories were investigated: their reliability in the hands of professionally qualified judges; children's consistency in using them on two "occasions", in treatment and in residence; and their validity against a factored personality test, the Guilford-Zimmerman Temperament Survey (GZTS).

Procedures. For reliablity, two interviews each of 26 children (9 local and 17 resident) were recorded on a undisguised tape recorder. Two five-minute sections were randomly chosen from each interview and played to groups of sophisticated judges, who independently assigned each child to a category after hearing the tape. Staff Js assigned only local Ss with whom they had no direct contact.

Assignments to category by staff members working with cases, and data from the reliability study were used for the hypothesis with an N of 18 resident children. Alpha was set at 5%.

An inverse factor analysis to determine validity was based on a matrix of correlations for five groups (AS, OA, AC, PC, PA) of 10 Ss each (41 boys and 9 girls) in which N consisted of 50"packets" of GZTS trait scores. Computation was done on the Penn State 650 Computer by the principal components method with unity in the diagonals. Six factors were rotated to simple structure as determined by the normalized varimax criterion. A seventh was dropped as too weak to interpret.

Conclusions. Within the limits imposed by small numbers, the findings showed that workers with professional competence in clinical fields could use the categories with satisfactory reliability. Evidence supported division of the categories into active (AS,OA,AC) and passive (PC,PA) and, tentatively, into controlling (AC,PC) and interacting with superficial unspecified. Further investigation is needed on dimensions, and on the consistency with which children maintain preferred behavioral patterns.

A MEASURE OF STUDENT ATTITUDE TOWARD TEACHING EFFECTIVENESS

--Robert Bennett Hayes

The purpose of this study was to develop a satisfactory undimensional scale to measure the attitude of college students toward the teaching effectiveness of their teachers. Such an instrument is needed to determine strengths and weaknesses of the teaching of the faculty. It is also desirable to know which of the faculty need the most help according to the way their students view their classroom instruction.

Data was obtained by the use of a multiple choice, four-alternate type instrument. Cornell scalegram analysis procedures were applied to the second and third pilot studies and this resulted in the original thirty items being culled to sixteen items. These items were administered in the major study of 1,070 male undergraduates in the various nine colleges of The Pennsylvania State University. Each of these students selected and rated his best instructior, then his poorest instuctor, and then one of his average instructors.

Cornell scalegram analysis procedures were applied to a stratified random sample of two hundred questionnaires drawn from all 9,310 questionnaires in the major study. One of the sixteen items was then eliminated because it had a coefficient of reproducibility of only .84. Intensity analysis was then performed with the remaining items for all 3,210 questionnaires in the major study. These fifteen items were administered in a follow-up study to ninety-three students who each rated the same two instructors.

Each of these fifteen items had to do with the kinds of classroom practices which are generally deemed desirable such as providing for student needs, making subject matter organization apparent to the students, making the students aware of the lesson objective during the lesson introduction, clearly indicating when the lesson is moving from one major point to another, stimulating student thinking, making clear explanations, including excellent examples, comparisons, and statistics, asking thought-provoking, meaningful questions, providing realistic and challenging instruction, effectively using voice, eyes, and gestures, enthusiastically presenting the lesson, effectively guiding students to the lesson objective capably emphasising the main points in the final summary, and effectively using teaching methods.

It was recommended that the fifteen item scale be administered at other colleges and univesities to determine if similar results would be obtained as in this study and to see if those results can be used to improve college teaching. Also it was recommended that further experimentation be conducted at other colleges and universities with the ten items which had the best coefficients of reproducibility in the follow-up study.

EDUCATIONAL OPPORTUNITEIS FOR MIGRATORY FARM CHILDREN

NEW YORK COUNTIES OF STEUBEN AND YATES,
AND THE PENNSYLVANIA COUNTY OF POTTER

--Walter Michael Whitlock

This study of the education of children of migrant agricultural workers was undertaken to describe the services available in the public schools for a selected geographical area and to review the literature pertinent for identifying the sources of migrant population.

Examples of programs that are being used throughout the country are cited. Responsible lawmakers in the Federal Government were interviewed and proposed legislatin is reported.

The emphasis of the study was placed on the current situation in Pennsylvania and New York state. Members of the state governments were consulted and present and proposed legislation is discussed.

Three counties were chosen for special interest. These included the New York counties of Stueben and Yates and the Pennsylvania county of Potter. This area was investigated through a questionnaire, visitation and interview.

Conclusions:

1. Administrative attitude toward migrant children is varied but is by and large favorable. The school boards and administation do accept migrant children and provide a program.

2. Schools that have placed migrants in integrated classes are more satisfied with their progress than those who have not. Most of the writers in the field favor the regular curriculum for the grade with adaptations for drill, remedial reading, and visual aids.

3. Fairly regular attendance of migrant children is not a problem with those who "show up". In many cases, school age children simply are not in school. The record and transfers of migrant children are in a very confused state.

4. The facilities and transportation are taxed by the overload of migrant children. Adult education is needed.

5. The literature reveals a need for Federal coordination of education of children of migrant agricultural workers.

6. There was little difference between the programs and services being offered in the schools of the two states. The summer school projects in Pennsylvania are sorely in need of state aid and the New York program need further expansion. There is a great need for correlation between the summer programs and the public school programs in the fall. Additional state and Federal aid is considered necessary by many studies of the migrant education problem.

THE EFFECTS OF NON-PUBLIC SCHOOL KINDERGARTEN EXPERIENCE UPON PUPILS IN FIRST GRADE

--Leroy C. Olson

A total of sixty-eight incoming first graders with kindergarten experience who met the criteria of the study were matched as a group with sixty-eight incoming first graders without kindergarten experience who met the criteria. The groups were matched on the basis of sex, age, position in the family, occupation of father, education of father, and mother working or in the home.

Areas which were significant in favor of the kindergarten group included:

> Reading readiness, total readiness and maturity rating by teachers at the .01 level of confidence.
>
> Arithmetic readiness, citizenship average for the year, scholarship average for the year and number achievement at the .05 level of confidence.

Because results of studies which were reviewed regarding the effects of kindergarten experience on intelligene were very contradictory, the author did not use an intelligence measure as one of the bases for matching the two groups included in the study. While no significant difference between the two groups was found in intelligence, the results were approaching significance in favor of the kindergarten group. A regression technique was utilized to take the effects of intelligence into account in all areas which were significant in the study. A check by the method of analysis of covariance was employed and similar results were obtained with the regression technique giving somewhat similar estimate of error.

After the results of the intelligence measure were statistically taken into account, the areas which were significant is favor of the kindergarten group were: (1) total academic readiness at the .05 level of confidence: (2) maturity rating by teachers at the .05 level of confidence.

The short range benefits of kindergarten experience were: (1) Academic readiness areas of reading, arithmetic, and total readiness, (2) Maturity as rated by teachers.

Long range benefits as manifested by measures after one year of school wrote: (1) Citizenship: (2) Scholarship: (3) Number Achievement.

No difference between the kindergarten and non-kindergarten groups were found in the areas of: Intelligence; maturity rating by parents, height and weight; citizenship rating after six weeks of school, effort after six weeks of school or throughout the year; reading achievement and total achievement.

COMPARISON OF ACTUAL AND PREFERRED PRACTICES OF PURCHASING IN SELECTED LOCAL DISTRICTS IN CERTAIN OHIO COUNTIES

--William David Graham

A questionnaire and an opinionnaire were developed based on procedures listed in the literature as pertinent to purchasing. Questionnaires were mailed to one hundred and two executive heads in twelve counties of which eighty-six were returned. An opinionnaire was sent to twenty-two specialists and twenty were returned.

The replies from the questionnaires and opinionnaires were tabulated into frequencies and converted into per cent. If both the districts and the panelists marked the same answer to the same item in 50 per cent or more of the cases, the administrators and specialists were considered to be in agreement. Disagreement existed if 50 per cent of more of the panelists and administrators marked a different answer to the same question.

As a follow-up to the questionnaires an interview was held was held with eighteen of the executive heads.

Conclusions

1. The study substantiates similar studies in that a wide divergence in purchasing procedure is predicted in school district.

2. Although some agreement exists between the district and specialists there are many disagreements. On the assumption that the recommended procedures are the desireable practices, the actual practices of the school districts should conform to the recommended changes.

3. There seems to be a lack of dissemination of recommened procedures to the school systems. There is a need for state and/or county offices to prepare and distribute statements of recommended practices.

4. Agreement exists among the writers, panelists, and practices of the districts that determining the need is a cooperative affair with the faculty, and that employees should have a voice in what is to be purchased and in what amounts.

5. The literature indicated standerdization and simplification of items should be considered in determining the needs. Supply lists should be kept according to the responses of the panelists. The majority of the districts do not keep the supply lists. However, the entire school staff should be and is informed of the purchasing standards.

6. Definite agreement between the panelists and districts does not exist as to the use of specifications. The panelists agree that specifications should be used, but the districts do not use them. The literature indicated that specifications should contain a general description as well as a detailed description of the article.

7. Competitive bids for all purposes over a certain amount should be and are used according to the panel and surveyed districts. The literature indicated that bidding, considering price and service, is a better method of purchasing than negotiations; the districts contacted in the oral interview were divided as to which was the better method. It was mentioned that the method that should be used depended on the item.

A STUDY TO IDENTIFY CRITERIA UTILIZED IN SELECTION AND APPOINTMENT OF FULL-TIME ELEMENTARY SCHOOL PRINCIPALS IN THE COMMONWEALTH OF PENNSYLVANIA

--Jack William Bronfeld

The information was gathered through the use of questionnaires, interviews and a review of the literature in the field of administration selection. The questionnaire consisted of ninety-nine items related to the area of selection and appointment. These items, plus open-ended questions allowing for individual remarks, fell naturally into three main categories: (1) Mechanics of selection, (2) Personal qualifications, and (3) Professional qualifications. The first area was involved with the responses of administratrators relative to their perferences and requrements in dealing with current practices identified as part of the selection method. The second and third categories was involved with the views of those administrators as they related to the respective areas of personal and professional qualifications of prospective full-time elementary principals.

The questionnaires were mailed throughout the Commonwealth to 170 administrative superiors of full-time elementary principals. The principals had been appointed to their positions in second, third, and fourth class school districts since 1955. In addition to the questionnaires, interviews were used to gather information from the only two first class school districts, Philadelphia and Pittsburgh.

Although the emphasis varied from district to district, the general pattern of selection and appointment contained the following elements or steps: (1) Establishment by the supervision principal and board of education of qualifications desired in the new principal, (2) Recruitment of candidates, (3) Evaluation of professional credentials, (4) Evaluation of personal qualifications, (5) Selection of leading candidates, (6) Recommendations of supervision principal, (7) Approval of the school board.

The administrator-respondents indicated a number of personal qualities and academic courses which they considered essential for the principalship.

The most prominent implications relating to colleges dealt with: (1) Reference for male administrators, (2) Internship progress, (3) Special Education, (4) Status of the elementary principal's position and (5) Academic course areas. Other implications were presented categorically for the consideration of prospective principals. These were: (1) Reference for male administrators, (2) High scholastic records, (3) Personality factors, and (4) age. Another group of implications were presented for the consideration of individuals responsible for selection procedures in Pennsylvania: (1) Qualifications list, (2) Degree requirements, (3) School board voting procedures.

THE EFFECTS OF FOREIGN LANGUAGE STUDY IN THE ELEMENTARY SCHOOL (FLES) ON FIRST YEAR ACHIEVEMENT IN A SECOND LANGUAGE

--Henry M. Ryan

Method of Procedure

Four separate analyses of covariance, single classifications were completed in which the control variable for every analysis was the mental age means of the various groups. The criterial in the four analyses were the T score experience group means of language prognosis test results, language achievement test results, language teachers' grades, and German oral comprehension test results.

Where differences among experience groups were determined to be significant, a regression equation was used to compute an adjustment factor for the criterion means. Where observed differences proved to be non-significant, a coefficient of correlation was computed between the criteria and the control variable.

Subordinate questions relating to the effects of the German (FLES) experience on the choice of a second language in high school and on the pupil's decisions as to their election of a second year of their chosen language were investigated by brief questionnaires.

Pupils and teachers were kept completely unaware that a study was in progress.

Summary of Findings

1. There was no significant differences to be found among the experience group means on the language prognosis test given at the beginning of the year. There was a highly significant correlation between prognosis test scores and mental ages.

2. Significant differences were discovered among the various experience groups on the achievement tests results, on the teachers' grades, and on the German oral comprehension test results. This significance, however, when analyzed by separate language experience groups maintained itself consistently only in German where the high school language was the same as that studied in the elementary school.

3. Before and after the adjustment of the group means for the effect of the control variable there appeared a perfect rank relationship between test scores and teacher grades in the German classes. This relationship did not appear in the Spanish or Latin groups.

EXTENT OF CERTAIN GEOGRAPHICAL SKILLS OF LATITUDE AND LONGITUDE OF SELECTED FIFTH AND SIXTH GRADE CHILDREN

--Mario Donald Rabozzi

This study attempted to determine to what extent fifth and sixth graders were able to use the skills of latitude and longitude for locational purposes. Specific questions employed were:

1. What precise skills can children use with understanding?

2. Is there supporting evidence that children at these grade levels were better able to use the skills in question than texts and courses of study assume?

Three alternate forms of a test, each containing sixty items, were constructed. Maps were included. The items were arranged as a power test. Professional geographers and teachers evaluated the items and their placement in the tests. A pilot group of forty S's was used to establish reliability. The following correlations were found by the Product Moment method: Forms A and B, r=+.73; Forms A and C, r=+.71; Forms B and C, r = + .89.

An eleven item questionnaire gathered data about children's outside school experiences that might increase geographic knowledge.

A fifth and sixth grade class was selected from four schools. Two schools were in a large city, one was from a village and one from a semi-rural area in upstate New York. Children from one city school were about average in ability and from an upper middle to upper class socio-economic community. All other children were average in ability and from middle class socio-economic levels.

The questionnaire data was gathered in October, 1959. In May, 1960, the Pre-test was administered, followed by a unit consisting of four lessons taught by the writer. A post-test followed. Four months later the groups were tested a third time. The questionnaire was completed by 233 S's and 209 of the S's completed all three forms of the test. Texts and courses of study used by the groups were examined for their treatment of latitude and longitude.

All eight groups had higher M scores on the Post-test and Delayed Test over the Pre-test. Total Post and Delayed Test M's were higher significant beyond the one per cent level.

A high level of performance on the items that measured children's understandings of the meanings and uses of latitude and longitude was evident. Longitude items did not appear any more difficult for the S's than did latitude items. In parallel tests on the skills in question children performed better when using a flat map than with a polar projection.

TWO METHODS OF TEACHING FOREIGN LANGUAGE
IN SELECTED ELEMENTARY SCHOOLS

--Earl F. Hartlaub

The method of procedure involved a carefully controlled experimental study in elementary school classes. Aural comprehension tests, intelligence test, and achievement tests were administered to the total group.

The isolated classes were taught French through continual and systematic repetition and review. In the integrated classes, French was not taught during a scheduled period of time, but was an enrichment program in the total elementary school curriculum. No foreign language was taught in the control classes.

Conclusions

1. The initial French test administered after six weeks of instruction in French indicated that the ability to understand French by the children participating in the study was further advanced by the teaching of the regular classroom teacher than by the teaching of the specialist.

2. The results of the final test in French administered at the conclusion of eight months of the teaching of the language indicated that instruction in French by a foreign language specialist produced a greater achievement in the understanding of French by the children participating in the study than was achieved by those children instructed in French by the regular classroom teacher.

3. In both the initial and final French tests, fifth grade students achieved higher aural comprehension of French than fourth grade students. After six weeks of instruction in French the difference in aural comprehension between fourth and fifth grade children was not significant.

4. Children of high mental ability seemed to achieve a greater comprehension of aural French than the children of average or low mental ability as interpreted by the difference in scores between the initial and final French tests.

5. Statistical data secured from the French tests would seem to indicate that the study of a foreign language in the elementary school has no adverse effect on the child's scholastic achievement in other areas of the curriculum.

THE DEVELOPMENT OF CRITERIA AND SCORE CARDS FOR USE IN SELECTING LOCATIONS FOR AREA VOCATIONAL-TECHNICAL SCHOOLS

--Neal Baker Perkins

Problem: The purpose of this study was twofold: (1) to develop criteria for the selection of locations for area vocational-technical schools, and (2) to develop score cards for the evaluation of selections made. One score card was to be developed for use in evaluating geographic territories identified to serve as attendance areas for area vocational-technical schools. The other score card was to be developed for use in evaluating plots of land selected as possible sites for area vocational-technical schools.

Procedure: The initial phase of this study consisted of reviewing pertinent literature and conducting personal interviews to determine factors which were considered to be of importance in selecting locations for area vocational-technical schools. The resulting list of factors was then arranged in two groups: one concerned with attendance areas, and the other concerned with sites. Validation of the two groups of factors was based upon questionnaire responses secured from a nation-wide jury of experts. The validated factors were then designated as score card items.

A second questionnaire was used for securing responses indicating relative valued for each of the score card items. Data was obtained from persons in forty-eight states and the District of Columbia who had experience in the development of vocational-technical education programs. That data provided the basis upon which item weights were assigned to each of the score card items.

After the score cards had been developed, they were used by evaluating teams for the evaluation of sixteen geographic territories and sixteen plots of land. The geographic territories and plots of land which were evaluated were those previously identified by vocational education authorities in Connecticut, New Hampshire, New Jersey, New York, and Pennsylvania. Each score card was used for four independent evaluations of eight locations which had been identified as being satisfactory for area vocational-technical schools. Scores obtained for actual use of the two score cards provided data for use in determining the validity and reliability of the two instruments.

Results: The attendance area score card yielded discriminative scores when applied to eight satisfactory and eight unsatisfactory attendance areas.

The site selection score card, when applied to eight satisfactory and eight unsatisfactory area vocational-technical school sites, also yielded discriminative scores.

The results obtained from conducting this study revealed that each of the score cards should serve as a valid and reliable instrument. It was also found that the ten items appearing in the attendance area score card and the thirty-three items appearing on the site selection score card would serve appropriately as criteria for the selection of locations for area vocational-technical schools.

BIBLIOTHERAPY IN A SIXTH GRADE

--Gloria Mattera

The Problem. The main purpose of this study was to test the hypothesis that books may help children in sixth grade face and solve their problems arising from everyday living. Secondary purposes were to determine: (1) the nature of these problems; (2) which books helped them with these problems; (3) how books served to prevent future problems, and (4) the feasibility of employing individual and/or group bibliotherapy in the self-contained classroom.

The Procedure. Two sixth grade classes, an experimental group of twenty-seven children and a control group of twenty-four children, were the subjects of the study, conducted from January to June, 1961.

Activities with the experimental group included: (1) individual bibliotherapy, (2) group bibliotherapy, consisting of a series of panel discussions on books the children thought could be helpful to people their age, and (3) activities essential to gathering pertinent information on the children: written compositions, a problem box, sociometric devices, pupil written books, and personality identifications.

The Conclusions. The main hypothesis of the study was supported through evidence collected from: (1) the children's oral and written statements about the books they had read; (2) books they had written; (3) the observations of the investigator, and (4) the results of the Bloomer Identification Figure Test.

The main hypothesis was not supported by the results of the California Test of Personality. A possible explanation was that this test was less valid for the experimental group because, as a result of their activities during bibliotherapy, the children were more select than the standardization sample.

The secondary purposes of the study were fulfilled. The evidence indicated that:

1. The children's problems were concerned with developmental tasks and basic human needs.

2. The books that helped them were those holding high interest for them, such as the books used for the panel discussions and individual bibliotherapy.

3. Books served to prevent future problems by building a background of various experiences and by giving the children insight into the problems of their classmates.

4. Under certain conditions, both individual and group bibliotherapy are feasible in the self-contained classroom.

STUDENT ATTITUDE TOWARD MANDATORY INDUSTRIAL ARTS COMPARED WITH SELECTED VARIABLES IN THE TEACHING SITUATION

--Robert Asa Campbell

The purpose of this study was: (1) to measure student attitude toward mandatory industrial arts courses taught in the junior high school, and (2) to ascertain the extent to which certain selected variables in the teaching situation are associated with student attitude toward industrial arts.

The hypothesis was that junior high school industrial arts classes taught under conditions rated high on the selected variables have higher mean student attitude toward industrial arts than do classes taught under conditions of lower rating scores.

The study was conducted by: reviewing the literature; identifying of constructing appropriate instruments to measure the selected variables; constructing a valid and reliable attitude scale; selecting 36 schools which had industrial arts programs rated from above average to below average and which fulfilled the other cirteria set up for participating schools (a 100 per cent favorable return of invitations to cooperate in the study was achieved); personally visiting all schools to administer the scale and to rate the industrial arts program on the seven variables; and statistically analyzing the data to draw conclusions regarding the hypothesis.

A pilot study was conducted and three separate item analyses were made on each of the 44 scale items used in the main study. Using the criterion value advocated in the literature of 1.75, it was found that all of the mean t values of the statements exceeded this value. In fact, the grand mean of the mean t values for each statement was 4.56.

Three main approaches were used to measure the validity of this scale including an outside criterion group. Statistically significant results were obtained for each of these three approaches. A reliability of .922 was found.

None of the coefficients of the correlation proved to be statistically significant at the commonly accepted levels of confidence. This may not necessarily mean that some of these variables are unimportant. Perhaps variables outside the school, such as parental attitude toward industrial arts, have such a great influence on the pupil that the industrial arts teacher has a limited attitudinal range in which to work within the school.

Conclusions

1. An exceptionally valid and reliable instrument was developed to measure student attitude toward industrial arts courses taught in the junior high school.
2. The hypothesis was rejected for it was found that not one of the seven selected variables in the teaching situation had a strong enough relationship with student attitude to be statistically significant.
3. The selected variables which were closely related to the teacher had the highest correlations.

A COMPARATIVE STUDY OF INDUSTRIAL TECHNOLOGY PROGRAMS IN AMERICAN COLLEGES AND UNIVERSITIES, WITH INDUSTRIAL ARTS TEACHER EDUCATION AND TECHNICAL INSTITUTE PROGRAMS

--Earl M. Weber

Statement of the Problem. This study is designed to determine what four-year programs of industrial technology are, what their purposes are, and in what manner they differ from other programs of industrial or technical education.

The various programs are compared in four different categories: purposes, staff qualifications, curriculum requirements, and student enrollments. The data from which the comparisons are made have been secured from two sources; a questionnaire survey of all the institutions involved and a study of college catelogues supplied by these same institutions.

Conclusions. The results of the study indicate that industrial technology may be defined as an educational program designed to give the student an insight into how goods are produced (through shop and laboratory courses), a knowledge of the problems of management and distribution (through courses in commerce), and the ethical foundation for making decisions (through courses in general education).

The purposes of industrial technology programs that are significantly different from industrial arts education and technical institute tranining are concerned with the preparation of students for positions of leadership in the manufacturing industries (i.e. management positions). The comparison of curriculums shows that industrial technology differs chiefly from industrial arts education in three areas: commerce, general education, and science. The mean number of semester hours of commerce required in industrial technology programs in 11.23 as compared to 1.22 for industrial arts; in general education it is 14.09 as compared to 41.24; and in science it is 19.85 as compared to 11.49 semester hours.

Industrial technology curriculums differ chiefly from technical institute training in commerce (11.38 compared to 3.78 semester hours), general education (14.90 compared to 3.30 semester hours), engineering (3.39 compared to 22.27 semester hours), and science (19.85 compared to 15.54 semester hours).

The qualifications of staff members of industrial technology programs are identical with those of industrial arts education inasmuch as a common staff is used for both programs (in all but one case). The qualifications are decidedly different for technical institute staff members with more emphasis on industrial experience and less on academic degrees, authorship of books and articles, and affiliation with professional education societies.

A FACTOR ANALYTIC STUDY OF PERCEPTIONS OF TEACHER ROLES

--Patricia Ann Dull

The specific purpose of this study was to explore the professional perceptions of three groups of people enrolled in education courses at the State University of New York College of Education in Cortland, New York. The guiding hypothesis of the investigation was that people could be ordered into meaningful clusters reflecting their self-perceptions and perceptions of others. A Q-sample of teacher descriptive statements were sorted by 30 freshmen, 30 seniors, and 30 in-service teachers. Each subject was required to sort the Q-statements once as the statements described the self-as-a-teacher and once as the statements described the public school teacher-in-general. The Q-sorts of the subjects within each group were intercorrelated, and the correlation coefficients were factor analysed. For each of the three groups, six factors were extracted from the perceived teacher correlations and five factors extracted from the perceived self-as-a-teacher correlations. Each of these factors could be observed as groups of subjects who showed similar teacher role perceptions. Twenty-three out of a total of thirty-three extracted factors were identified and interpreted. This was accomplished by correlating the factor loadings on each of the factors with the item placement values on the Q-sort. The items which correlated highly with the factor were included in the interpretation of the factors. The results of the six factor analyses were considered to represent the dimensions of professional perceptions at three different levels of the teacher education program.

The In-Service Self Factors are as follows: Factor 1 - Realistic, Managerial Orientation; Factor 2 - Student-Centered, Permissive Teacher; Factor 3 - Communication Problems-Inconsistency; Factor 4 - Cynical Democrat-Detached and Indifferent. The In-Service Teacher Factors are as follows: Factor 1 - Uninterpretable; Factor 2 - Negative Stereotype of Traditional Teacher; Factor 3 - Directive Teacher-Positively Viewed; Factor 4 - Student-Centered Teacher-Positively Viewed; Factor 5 - Directive Teacher-Negatively Viewed.

THE EFFECT OF BARRIERS ON THE CREATIVE DEVELOPMENT AND AESTHETIC QUALITY OF THREE-DIMENSIONAL ART FORMS

--William P. Wilfong

The purpose of this study was to examine the effects of predetermined influences or barriers on the creative development and aesthetic quality of three-dimensional art forms. The major criterion used throughout this study was over-all aesthetic quality. Two additional criteria, dependency and independency as noted in the art forms, and the degree of drawing relatedness to the sculptural forms, were considered.

Six classes of college students, with a total population of 109, were used as control and experimental groups. Each student was asked to develop a sculptural form (human figure) from the assigned plaster-vermiculite material and additional media such as wood, wire, and paint. The control (non-barrier) group was permitted to work in an unrestricted manner, while the experimental (barrier) group was interfered with during each of the four work periods. Two barriers were imposed on this group during the sculptural process: (1) form limitation, (2) interruption of process, (3) limitation of new material, and (4) forced completion.

Two five-member judge teams were selected. One group of judges, the process (study) judge team, made judgements of the work while it was being developed and as completed art forms. The second group of judges, the independent judge team, evaluated the completed forms and was used primarily for the purpose of judge reliability.

The analysis of data (t means gains) between the first and fourth art experience of the control groups as compared to the first and fourth art experience of the barrier-influenced groups indicated a highly significant difference of increase in the over-all aesthetic quality of the art forms in favor of the barrier groups in a negative manner.

Consistent and higher relationships (coefficients of correlation) of the various process experiences 1, 3, and 4, continued to show that the unrestricted performance, without barrier influence, contributed to the continuous growth and creative development of the over-all aesthetic quality of the sculptural forms of the control group.

The degree of dependency and independency, in terms of mean scores and standard deviations, as noted in the three-dimensional forms while they were being developed and as completed forms, is proportional to the decrease and increase of the over-all aesthetic quality of the judged work of the control and experimental groups.

It also becomes evident that drawing, used as a method of interrupting process, does influence individuals in the direction of a preconceived approach. This seems to affect in a negative manner in sculptural concepts of students undergoing a three-dimensional art experience.

The relationship of drawing to sculptural expression continues to remain unclear. As a result of this study, drawing, when judged for over-all aesthetic quality, is not considered highly dependable as a predictor of aesthetic quality of three-dimensional art forms.

AN INVESTIGATION OF THE VALIDITY OF SELECTED CRITERIA FOR ADMISSION TO A VOCATIONAL HIGH SCHOOL

--Benjamin C. Whitten

The problem of the study was to discover criteria that have the greatest relationship to success in a vocational high school program and that can be used successfully to select students from applicants who have completed the ninth grade. The study, conducted at the Carver Vocational-Technical High School, Baltimore, Maryland, included 873 enrollees who entered the school at the tenth grade level from September, 1955 through February, 1958.

Comparisons of mean scores, correlations, multiple correlation and comparisons of percentages were employed with the data. An IBM 650 Computer was used to process the major portion of the data.

Of the 873 enrollees studied, 303 graduated, 372 withdrew after completing one or more semesters, and 198 failed to complete a semester. The enrollees attended an average of 3.47 semesters. Those who graduated had mean scores that were superior at the 1 per cent level of significance to the mean scores of the other groups in all of the variables except art, clerical, and mechanical aptitude. When separated into general education, trade or vocational school achievement groups the mean scores of the groups for the predictor variables were greater as one progressed from the lowest to the highest groups except for art, clerical, and mechanical aptitude.

Highest zero-order and multiple correlations were obtained for general education average; the lowest were obtained for trade average. The coefficients for vocational school achievement were not significantly lower than those for general education achievement. No particular advantage accrued from separating the enrollees into groups according to their sex or source of entry.

The multiple correlation coefficient for vocational school achievement was .495. Variables that contributed to the correlation at the 1 per cent level were industrial arts or home economics, ninth grade attendance, intelligence, arithmetic and ninth grade social studies. Ninth grade attendance was the best predictor of persistence and graduation, and also showed a marked relationship to achievement.

Recommendations were: (1) that enrollment at the school studies be limited to applicants whose chances for success and promise of persistence are best; (2) that ninth grade attendance or the variables that were significant in the multiple correlations for achievement be used as criteria for admission; (3) that improved guidance services be developed for enrollees whose profiles predict poor achievement or persistence; (4) that vocational programs which are not rigid in their general education requirements be established for youth who do not meet the entrance requirements of the vocational high school program; and (5) that favorable attitudes be developed among the personnel of sending schools towards the referral of more capable students to the vocational high school.

THE INTERACTION OF CERTAIN VARIABLES IN THE APPERCEPTION OF PAINTING

--William Ross Stewart

Three specific dimensions of the apperceptive process were investigated. They were:

1. An intercorrelation and factorial study of the measurable responses by the sample group on five modes of apperception measures using eleven reproductions of paintings as stimuli.
2. A description of unique, inherent apperceptive characteristics of groups of students extracted from the sample population through the use of the inverted factor analysis.
3. A study of the relationship and variance among certain measurable aptitudes, abilities, values, teaching attitude, and five modes of apperceiving the paintings.

There was evidence that a general art acceptance factor composed of the intrinsic, the spontaneous-deliberate and the total art acceptance modes of appercepetion accounted for the largest amount of variance within the individual paintings. Evident also were the independence and the flexibility of the personal and the spontaneous-deliberate modes of apperception, both of which showed significant relationships to the other modes or maintained a degree of independence depending upon the particular responses to the specific painting stimulus.

The second dimension of the study, in which five unique apperception groups were extracted through the use of the inverted factor analysis procedure, further disclosed in the diversity with which individuals, grouped according to their apperceptive characteristics, apperceived the total paintings.

The study of the relationship among the five modes of apperception to the works of art by the sample population and certain measurable aptitudes, abilities, values, and teaching attitude they held was the third dimension of the study. The significant relationship between the aptitudes and abilities measured and certain apperception modes clearly support the presence of a general ability factor in aesthetic apperception. Those people within the group who tended to score high in these modes of apperception which seemed to represent a general aesthetic factor showing acceptance and openess to different kinds of paintings. The values and teaching attitude measured had a less significant and meaningful relationship to the process of apperception. In addition, the analysis of variance of the responses to the eleven paintings showed that within six of the paintings the verbal and the quantitative scores of the group when used as sources of variation had a significant effect, positive and negative respectively, upon the variation accountable by the responses representing the five modes of apperception.

FILMED DEMONSTRATIONS WITH MANUAL CLASS DEMONSTRATIONS
VS. CONVENTIONAL DEMONSTRATIONS IN INTRODUCTORY WOODWORKING

--Leland Kenneth LeMaster

Statement of the problem. This study was to determine the effect of pupil learning of specially prepared filmed demonstrations of selected teaching units in introductory woodworking when presented to the class before the manipulative skill was preformed by the instructor.

Procedure. The experimental method employing the experimental-control group technique was used to collect data for this study. An effort was made to control some of the major variables which might have affected this study: (1) equipment, (2) materials, (3) tests, (4) scoring of the pupil's tests, (5) visual aids, (6) procedure, and (7) teachers. While there was no random assignment of pupils to classes there was substantial evidence that the paired groups (experimental to control) were similar in intelligence, technical knowledge, and skills. Schools were selected that offered at least two classes of introductory woodworking taught by the same instructor. Twenty selected demonstrations based upon student attainments as defined by the Texas Education Agency were submitted to a jury of twelve industrial arts teachers. Eight demonstrations were selected for filming. All films were filmed and edited by the researcher.

The Industrial Arts Test was structured by the researcher and submitted to a jury of ten industrial arts teachers for validation. Six groups containing one experimental and one control class were compared by test scores from the Lorge-Thorndike Non-verbal Intelligence Tests, the Industrial Arts Test and Manipulative Industrial Arts Test. A course of study for a period of nine weeks was constructed for each teacher.

After six weeks of formal instruction the same Industrial Arts Test and Manipulative Industrial Arts Test were given. Objective score sheets were constructed for the Industrial Arts Test and the Manipulative Industrial Arts Test. the instructors administering the tests were not involved in the scoring and the recording of grades. All manipulative tests from both the pre-test and the post-test were scored by a team of three industrial arts teachers.

Conclusions. On the basis of results obtained from this investigation, the following conclusions seem warranted: (1) the film reinforcement to the manual class demonstration enables pupils to learn more related technical information, (2) enables pupils to understand and apply the manipulative skill processes more efficiently, and (3) enables the pupils to reduce repeat demonstrations (both small-group and individual), required of the instructor. Such a technique as used in this study should be a decided benefit to pupils in other areas of learning in the industrial arts curriculum.

THE MUTUAL EFFECT OF AN EXCHANGE OF CHILDREN'S CREATIVE DRAWINGS BETWEEN FOREIGN COUNTRIES

--Myrrl H. Krieger

This study is concerned with the question of whether a significant directional change on certain drawing criteria can be demonstrated as a result of an exchange of children's creative drawings between two different countries.

In both the Pilot and Main Studies, the topic "Family Life" was chosen for a series of three drawings by the children from two cities in America and two cities in Germany. The first picture, "What Family Life is Like in My Country," was the only drawing of the series to be exchanged. The second picture, "What I Imagine Family Life is Like in the Foreign Country," was drawn before seeing the exchange drawings. The third picture, "What Family Life is Like in the Foreign Country," was done after the children had looked at the exchange drawings.

Sixteen criteria were selected by judges as a basis for comparison of the drawings. Some were discernible from the drawings, and some were taken from the developmental stages of growth in the literature. The sign test was used because the differences observed in the drawings could be represented by a plus, minus, or zero, indicating increase, decrease, or no change in a criterion. Scores for the individual schools and nationalities. Totals for the American and German schools were used in the statistical test for accepting or rejecting the experimental hypothesis.

The findings were as follows: A significant directional change was seen in eleven of the sixteen criteria. Four criteria showed a non-significant change and one criterion showed no change at all.

Of the eleven criteria which showed a significant change, three of them were found to be mutually influential. These were: Bold Pattern, Decorative Pattern, and Discrepancies in Spatial Concepts. On these the Americans significantly increased and the Germans significantly decreased.

One criterion, True Spatial Concepts, increased significantly in American drawings, but showed a non-significant decrease in the German drawings.

Seven criteria showed a significant decrease in the German drawings; and non-significant increase in the American drawings. These were: Amount of Detail, Emphasis on Man-made Objects, Gestalt Judgment, Emphasis on Figures, Variety of Line, Texture, and Diversity of Color.

Processes of children's thinking were evident in that subject-matter, ideas and techniques were transferred from one country to another. Evidence of the influential nature of a country's culture was seen in the fact that it was possible to distinguish the American and German drawings before and after the exchange.

THE EFFECTS OF PRAISE AND CRITICISM ON THE CREATIVE DRAWINGS OF FIFTH GRADE CHILDREN

--William J. Kusma

This study was concerned with the possible effects of external incentives such as praise or criticism on the creative drawings of fifth grade children. The need for the study was justified in that no similar type of investigation had been conducted in art education and because of the scarcity of evidence regarding the comparative value of such incentives as they are employed in the art education of elementary school children. It was hoped that by applying various experimental Treatments of Praise and Criticism to randomize groups of fifth grade children, comparisons of pre and post-test drawing scores would provide evidence as to the effects that such incentives may have had on their creative expression.

Experimental Design for Classes and Treatment Groups

First Week	Second Week	Third Week	Fourth Week
Pre-Test Drawing with Motivation No. 1 and no Treatment applied.	Second Drawing with Motivation No. 2 and first Treatment applied.	Third Drawing with Motivation No. 3 and same Treatment repeated.	Post-Test Drawing with Motivation No. 1 repeated and no Treatment applied.

The regular art teacher gave the same motivations to all five classes and applied the appropriate Treatment of Praise or Criticism to each pupil according to his Group placement. No Treatments were applied during the pre and post-test drawings in order that the effects of Praise or Criticism Treatments applied during the second and third drawings would be more apparent. Comparisons of pre and post-test mean gain scores revealed the differences of these effects in children's drawings. The four drawings were spaced one week apart.

Drawings were judged on Criterion No. 1, Self Identification-Involvement (25 points), and Criterion No. 2, Over-all Aesthetic Quality (25 points). A five-point judge scale was used (5-good, 3-average, 1-poor).

Conclusions

1. Introverts and Extroverts achieved the greatest gains from Praise Treatments. Regardless of whether it was Praise or Criticism, Introverts and Extroverts tended to achieve their greatest gains following the first Treatment application.

2. Praise Treatments exerted the most favorable effects upon both the low I.Q. and the High I.Q. Groups. Low I.Q.s made greater gains than High I.Q.s in both Praise and Criticism Treatments.

3. Results of the experiment support the use of Praise rather than Criticism as a means of promoting creative art expression.

THE RELATIONSHIP BETWEEN POPULAR-UNPOPULAR
PICTORIAL SUBJECT MATTER AND ART
ACHIEVEMENT AT THE JUNIOR HIGH SCHOOL LEVEL

--William Thomas Brown

A discussion designed to enhance motivation was supervised by the teacher. Care was exercised to insure an utomost of impartiality in the discussion of each of the one word topics. Elaborate, strong image-inducing discussions of the topics by members of the test group were discouraged at any point that the teacher felt such comments might infringe upon the individuality of other pupils in the same group. A variety of approaches to the topics was encouraged to avoid an over-emphasis upon any single preference of the problem's alternatives.

Four paintings, each represented one of the four classifications to topic popularity, were produced by each member of the population. Two of the four paintings were produced in watercolor and two in tempera.

A total of six-hundred and twenty-four paintings were gathered in the study. These were judged for over-all aesthetic quality, without discriminating as to grade level, sex of the painter, and medium by a team consisting of four teacher-artists experienced in making judgements of adolescent art products.

Conclusions

1. Topic popularity has no significant relationship to the aesthetic quality of adolescent paintings.

2. Topic popularity differs greatly between boys and girls.

3. Girls achieve consistently higher aesthetic quality in painting during adolescence than do the boys.

4. Tempera is preferred as a medium over watercolor, and higher aesthetic quality is achieved by adolescents in this medium.

5. In effect, the greater amount of time spent in the production of an adolescent painting, the higher its aesthetic quality.

6. A significant difference in aesthetic quality exists among grades, and although grade level assendancy is not matched by a consistent rise in aesthetic quality, the higher grade levels do produce higher aesthetic quality.

[illegible]

--Herbert Joseph Burgart.

This investigation was undertaken in an attempt to arrive at certain empirical evidence which would reinforce existing theoretical beliefs concerning the value of art experience in higher education. Specifically, this study is confined to the acquisition of art experience at the higher education level and certain dimensions of personality, general creativity, and aesthetic performance in art.

The above measures were administered to 100 university level students whose academic level ranged from Sophomore to, and including, Graduate student. Together with the above battery of measures, each individual within the population contributed two art products which were based on identical motivations and later submitted to judgment by four art experts.

All measures utilized within the study were found to be significant at the .01 level or above by means of the Kuder-Richardson formula for test reliability. The judgments of art products by the four art experts were found to contain no significant variance upon application of the F test for significance of differences. Item analyses of appropriate measures were undertaken, regression coefficients and multiple correlation coefficients were computed for specific measures, an intercorrelation matrix and a principal components factor analysis was computed yielding eight significant factors.

Of perhaps equal educational import were several of the factors yielded from the factor analysis of the intercorrelation matrix. The "Creative Art Experience" factor indicated significant variable loadings on self-sufficiency, social independence, flexibility, non-conformity, self-identification, verbal creativity (verbal fluency, verbal originality, manipulative fluency, form perception, tendency for abstract response, and tendency for action response), and visual creativity (aesthetic composition, perceptual quality, visual flexibility and visual originality). The "Verbal Creativity" factor yielded significant loadings on variables which were decidedly verbal in nature while indicating significant negative loadings on all visual creativity measures. The appearance of the "Verbal Creativity" factor seems to stress the unique differences between visual and verbal measures of creativity while the "Creative Art Experience" factor contains significant positive loadings on both types of creative performance.

The remaining significant factors were the "Creative Insecurity Syndrome" factor, the "Abstract Orientation Responses" factor, the "Concrete Response Indication" factor, the "Non-Relational Maturity Response" factor, the "Creative Personality Syndrome" factor, and the "Verbal Action Response" factor.

AN EXPERIMENTAL ART PERFORMANCE TASK TO DETERMINE THE EFFECT OF COLOR UPON THE OVERALL AESTHETIC QUALITY OF THREE-DIMENSIONAL FORMS

--Robert Leslie Stewart

The writer developed an art performance task of a three-dimensional nature that was performed by a non-art undergratuate population of eighty subjects. These subjects were enrolled in four art education classes at The Pennsylvania State University, University Park, Pennsylvania.

The art performance task consisted to twelve rectilinear shapes of heavy cardboard covered with colored construction paper. The colors used were the primary and secondary colors. These colors and shapes were randomized. Also included were instructions, a few straight pins (for bracing) and a small tube of cellulose model or household cement. These materials were assembled into eighty kits. Eighty similar kits were assembled using uncolored materials.

The art performance task was designed to attempt to answer the question, What is the overall aesthetic effect of color upon three-dimensional forms? To do this, the investigator divided the population of eighty subjects in half. Forty of the subjects received kits of uncolored materials and forty of the subjects received kits of colored materials.

The subjects were then asked to construct a three-dimensional form from the materials contained in the kit. When this original form was completed, the subjects were then given the opposite kit and asked to make a copy, exact as possible of the original form.

The one hundred and sixty forms were coded by the investigator as to original or copy form and then randomly arranged into two groups, the colored forms in one group and the uncolored forms in the other group.

Using a seven point scale one - low and seven - high, these forms were judged on a overall aesthetic quality by two judge groups, an expert and a peer group. Seven judges were used in each group.

Analysis of Variance was used as the statistical model to examine the data gathered from the judge groups. The variables examined by the analysis of variance were the judges, the color, the object, the process (original to copy), and the effect of order.

The conclusions of the investigation showed that color is detrimental to or detracts from the overall aesthetic quality of the three-dimensional forms as constructed and evaluated within the limitations of this study.

THE EFFECT OF ART EXPERIENCES ON THE SELF-CONCEPT OF INSTITUTIONALIZED ADOLESCENT FEMALE MENTAL RETARDATES

--James Walter Crawford

The purpose of this study was to investigate the effect of art experiences on the self-concept of mental retardates. The question considered was, "Do creative and directed art experiences result in differential effects on personal adjustment?"

The experimental sample consisted of seventy-five institutionalized, female, mental retardates ranging in age from 14 to 18 and with a Wechsler IQ range of 50 to 80. In order to test the hypothesis, the sample was randomly divided into three equal groups. Each student in two experimental groups attended art classes once each week for a period of ten weeks; a control group received no art instruction during this period. The first group, designated Creative Group, was involved in activities that provided opportunities for the expression of feelings, wishes, and the body image. Lessons with the second group, designated Directed Group, involved the use of patterns and repetitive procedures.

Two measures of self-concept, recently developed by Butler, Guthrie, and Gorlow at Laurelton State Village, Pennsylvania, and chosen because they were constructed particularly for use with mental retardates, were administered at the beginning and again at the end of the experiment. The Verbal Self-attitude Scale deals with discrepancies from what is socially desirable and the Pictorial Test of Self-evaluation deals with discrepancies from the self-ideal.

Results on the Verbal Self-attitude Scale provided no statistical evidence that art experiences aided self-adjustment. However, a comparison of the variances of the gains and of the post-test scores on the Pictorial Test of Self-evaluation indicated that the variance of the scores of the Creative Group was significantly smaller than either of the other groups. This indicates less variation in the number of expressions of personal dissatisfaction. On the assumption that the mean is representative of a realistic concept, and that a realistic concept indicates better adjustment, it can be concluded that, in this study, creative art experiences aided the retardates in achieving better personal adjustment. Observations during the art sessions also provided indications that the Creative Group profited from the art experiences in respect to degree of self-expression and self-awareness. Judgements of the drawings of the Creative Group offered evidence of increase in self-concept, self-involvement, and over-all quality.

SOME ASPECTS OF COMFORTABLE LOUDNESS

--Raymond P. Lezak

Fifty-six subjects served in the study. Forty-two of the subjects were hard-of-hearing and the remainder were normal hearing but the spouse of each complained that the subject had trouble hearing.

A battery of tests were administered: pure tone air and bone conduction, Békésy, threshold of uncomfortable loudness for speech using the Method of Limits, speech reception threshold test using recorded W-2 spondee material, and speech intelligibility using four tape recorded PB-50 word lists at 5, 15, 40, and 60 db SL. A fifth tape recorded PB-50 list was administered at the ULCL, which was selected as a level five db less intense than the threshold of uncomfortable loudness.

The data were analysed for all subjects taken as a single group and for the same subjects grouped and regrouped on the basis of (a) hearing sensitivity, (b) on the basis of functional diagnosis, (c) on the basis of audiometric pattern, (d) on the basis of recruitment, and (e) on the basis of sex. Coefficients of correlation were computed to express the relationship between the SRT and ULCL scores. Comparison of Range to Uncomfortable Threshold (RUT) scores was done by computation of U tests. Variance ratios for ULCL were computed to determine whether a significant difference existed in the variability of ULCL between subgroups of subjects as they were divided on the basis of hearing sensitivity, or functional diagnosis, and so forth.

Conclusions:

1. When audiology clinic subjects are taken as a single group, the upper limit of comfortable loudness (ULCL) decreases as the SRT increases.

2. The increase in ULCL as the SRT increases in some subjects and the decrease in ULCL as the SRT increases in other subjects suggests that further research should be extended to this phenomenon probably with a larger and more homogeneous audiology clinic population.

3. For most audiology clinic subjects, the db difference between SRT and ULCL is not significantly different than 40 db. When audiology clinic patients are grouped by audiometric pattern, the Flat sub-group subjects show a db difference in the order of 50 db, and for normal hearing subjects the db difference is the order of 60 db.

4. There is no significant difference in variability of the upper limit of comfortable loudness among sub-groups of subjects but large differences in individual scores appear.

5. Generally, the score at PB MAX is greater than the obtained PB score at ULCL, PB score at 40 db SL, and PB score at 60 db SL for audiology clinic subjects.

6. For most clincial audiology subjects, it appears that a reasonable technique to determine the PB score at PB MAX is to obtain the PB score at ULCL and add a correction of 5 per cent.

PICTURE IDENTIFICATION TEST OF DISCRIMINATION FOR SPEECH

--George S. Haspiel

A need exists for a speech discrimination test which takes into consideration the special problems which arise in thehearing testing of children. The choice of test items and the task should be such that they are suitable for children with all levels ofhhearing capacity. Furthermore, the test should be constructed on the basis of phonetic factors which can be supported by available research.

The Picture Identification Test of Discrimination (PITD) study was undertaken to develop a test which satisfied the above criteria. Familiar picture-words were selected which were to be discriminated from other cognate picture-words on the basis of phonetic differences between initial consonants. The following categories of phonetic idifferences were employed: voicing (V), influence (I), pressure pattern (P), voicing and influence (VI), voicing and pressure pattern (VP), influence and pressure pattern (IP), and voicing, influence, and pressure pattern (VIP).

A total of 132 picture-word-pairs was presented to 20 noraml hearing, 20 sensori-neural impaired, and 20 conductively impaired children between the ages of 9 and 12. According to an item analysis of the 132 items, 48 were selected which met a requirement of item to total test score relationship.

The empirical validity of the PITD as discovered through a comparison of the PITD and the Phonetically Balanced Kindergarten (PBK) speech discrimination test, was moderate and positive as indicated by the correlation coefficient of .63 for the combined group of subjects, .62 for normal subjects, .56 for sensori-neural impaired subjects, and .65 for conductively impaired subjects.

The reliability of the PITD, as discovered through the application of a Kuder-Richardson inter-item formula was .81 for the combined group of subjects, .78 for normal subjects, .78 for sensori-neural impaired subjects, and .80 for conductively impaired subjects.

An analysis of the relative difficulty for the discrimination of phonetic categoreis showed the following order: VI (easiest), VIP, IP, P, VP, V and I (hardest).

An analysis of differences between mean scores of the hearing loss subgroups showed no significant differences between means of the normal (M = 83%, S.D. = 11%) and conductive (M = 77%, S.D. = 13%) subgroups, no significant differences between means of the conductive and sensori-neural (M = 74%, S.D. = 13%) subgroups, but a difference between normal and sensori-neural subgroups which was significant at the 5% level.

The conclusions reached from this study are that the PITD is a valid, reliable test for discovering degrees of discrimination ability in children.

EFFECT OF CONSISTENCY OF ARTICULATION OF (r) AND (s) ON GAINS MADE WITH AND WITHOUT THERAPY

--Maude C. Brungard

The major purpose of this study was to determine whether the consistency with which a first grade child correctly articulates the (r) and/or (s) sound can be used to predict whether he will make significantly greater gains toward the consistently correct production of the sound with therapy than without therapy. Consistency score was the number of correct productions of the sound occurring on a deep test (pre-test) of articulation which presented the sound in 60 different phonetic contexts.

The subjects of the experiment were 160 first grade children. They were divided according to the therapy time available in the various schools into two groups of equal number (80) designated as therapy and no-therapy; each group was sub-divided on the basis of misarticulation of (r) or (s) (N=34 for (r) and 46 for (s)). On each sound the therapy and no-therapy groups were essentially alike at the initiation of the project with respect to mean pre-score, mean chronological age, mean intelligence quotient, and the proportion of male subjects.

After a six-months period when children of the therapy group received a half hour of therapy per week and children of the no-therapy group received no attention from the speech therapist, the same deep test (post-test) was re-administered, and the difference between the pre- and post-test results were considered as gain.

An analysis of the gains made showed that all groups--therapy and no-therapy on both (r) and (s) made significant progress toward the consistently correct production of the sound during the six months. On the (r) sound the therapy group did not make significantly greater gains than the no-therapy group, but on the (s) sound the therapy group, treated as an entity, made significantly greater gains than the no-therapy group.

To permit a comparison of the gains made by children with pre-scores indicating varying proportions of correct production the therapy and no-therapy groups on both (r) and (s) were subdivided on the basis of pre-scores into 15 per cent levels of consistency. On the (r) sound no significant differences were revealed in mean gains between therapy and no-therapy subgroups at any consistency level.

On the (s) sound the therapy subgroup composed of those subjects who scored less than 15 per cent on the pre-test made significantly higher gains than the corresponding no-therapy subgroup. At other consistency levels, although the therapy group made in most cases greater gains, the gains were not significantly greater than those attained by the no-therapy group. Thus, it appeared that the consistency with which a first grade subject articulates the (s) sound can be used to predict whether he will make significantly greater gains toward consistently correct production of the sound with therapy than without therapy.

THE DEVELOPMENT AND EVALUATION OF A MEASURE OF COUNSELOR EFFECTIVENESS

--James W. Kelz

It was the purpose of this research to construct and evaluate a measure for assessing counselor trainee effectiveness. To this end, a rating instrument was developed after careful selection of qualities to be rated from characteristics of effective counseling set forth by experts. Specific conditions were established for use of the rating instrument by a panel of six trained judges in the evaluation of thirty counselor trainees, who were members of a National Defense Education Act Counseling and Guidance Institute conducted at The Pennsylvania State University during 1960-61. Two standardized interview situations, each emphasizing problems commonly encountered by secondary school counselors, were developed. One situation emphasized the relational aspects of counseling, whereas the other stressed technical proficiencies such as the intergration, interpretation, and application of data. Portrayals of these situations were provided by two student actors who were coached to present problems with as much the same content and behavior as possible in televised interviews with the counselor trainees. The use of standardized interviews permitted the panel of judges to assess counselor effectiveness under conditions designed to insure comparability and, hence, a fair appraisal of counselor trainees.

Spearman rank order coefficients of correlation served as indices of the validity for ratings made by the panel of judges when rankings made by practicum supervisors were used as the criterion. Low correlations were obtained, indicating that in all probability rankings made by practicum supervisors were influenced by characteristics other than those revealed by counselor trainees in interview situations.

Counselor effectiveness ratings made by advanced doctoral candidates, coached counselees, and counselor trainees were studied using the ratings of counselor educators as a standard. It was concluded that advanced doctoral candidates, coached counselees, and counselor trainees rated with acceptable reliability when the stress in the interview was on the relational aspects of counseling. However, the reliability of ratings made by these groups suffered when the interview stressed the evaluation of more technical proficiencies.

A tally judgments of the coached counselees' performances indicated that the judges considered both the counselees' characterizations and their presentations of the problems to be both realistic and consistent, giving strong support to the feasibility of using standardized interviews as an evaluative technique.

It was concluded that the rating instrument developed and the techniques employed for its use constitute a useable, realistic measure for assessing the counseling proficiency of counselor trainees.

THE DEVELOPMENT AND VALIDATION OF INSTRUMENTS AND TECHNIQUES FOR THE SELECTIVE ADMISSION OF APPLICANTS FOR GRADUATE STUDIES IN COUNSELOR EDUCATION

--Darrell Fred Rishel

Problem

The central problem of the study was to determine *how* students best may be selected for initial entry into graduate programs of counselor education. Four hypotheses were formulated:

1. A significant relationship exists between a criterion of academic achievement in formal course work and scores on tests of scholastic aptitude, scores on selected interest and personality inventories, grades in introductory courses, and selected items of demographic data.
2. A significant relationship exists between a criterion of counselor effectiveness in an interview situation and scores on selected interest and personality inventories and selected items of demographic data.
3. Ratings of personal suitability, arrived at through teacher appraisal of student personal potential after one semester of normal classroom contact, will provide a valid prediction of counselor effectiveness in an interview situation.
4. An item analysis of selected personality inventories on the basis of the criteria of academic achievement and counselor effectiveness will provide a sufficiently large pool of items for the construction of an experimental "Counselor Attitude Inventory."

Tests and inventories were administered to a basic population consisting of thirty master's candidates who were enrolled in the NDEA Guidance and Counseling Training Institute at The Pennsylvania State University during the 1960-61 academic year.

In order to provide a cross-validation population and to indicate the applicability of the finding to other students in various counselor education programs, selected instruments from the battery were administered to sixty-seven other enrollees at Penn State during the summer and fall of 1960.

The first hypothesis was confirmed only so far as it pertained to tests of scholastic aptitude, introductory course grades, and the junior-senior grade-point-average. The second hypothesis must be rejected in its entirety along with the third hypothesis.

The item analysis resulted in a pool of 168 items which would discriminate at or beyond the .03 level of confidence on the basis of one or both criterion measures. Correlation coefficients between scores obtained by rescoring the original answer sheets of both the basic population and the cross-validation population and the criterion measures ranged from .53 to .80, thereby indicating that the "Counselor Attitude Inventory" to be based on these items is worthy of further research. Copies of the inventory are available from the author or the thesis advisor upon request from qualified counselor educators or researchers.

COLLEGE FIRST SEMESTER ACADEMIC ACHIEVEMENT AS RELATED TO CHARACTERISTICS OF A HIGH SCHOOL GRADUATING CLASS

--James W. Laughlin

Problem

The main purposes of this study were: (1) to appraise the value of the four predictors--high school rank, high school index, graduating class size, and per cent attending college--for the prediction of the first semester academic achievement of students in non-science and science curricula at The Pennsylvania State University; (2) to appraise the value of the four predictors plus the additional variable of an English sub index for the prediction of the first semester English grade point; (3) to appraise the effect on the predictive value of the aforementioned variables for the prediction of first semester college grade point when only students from the first fifth of the high school graduating class are considered and (4) to appraise the effect of the prediction value of the aforementioned variables for the prediction of English grade point when only students from the first fifth of the high school graduating class are considered.

All data for the study were gathered from the records available in the Admissions Office and the Office of the Registrar of The Pennsylvania State University, the Research Section of the Pennsylvania Department of Public Instruction, and from questionnaires mailed to 310 non-Pennsylvania public high schools. The information was collected as raw scores and were classified as to science or non-science dependent upon the freshman's curriculum at the completion of one semester at The Pennsylvania State University. The non-science group consisted of 2207 freshmen with the science group consisting of 1819 for a total of 3526 freshmen included as the population of the study.

All information once collected was punched for processing through an IBM-650 Computor. Correlations (zero-order, regression equations), standard deviations, and means were computed on the IBM-650 Computor with other statistical treatment done on a desk calculator. The statistical treatment of the data was indentical for both the non-science and the science curriculum.

A second phase of the statistical approach involved the identical procedures as previously stated with the exception that only students whose high school rank placed them in the first fifth were included.

Findings and Conclusions

A consideration of the statistical findings produced the following conclusions:

1. The high school index is superior for prediction of first semester college grade point at The Pennsylvania State University than an applicent's high school rank by fifth, graduating class size, or the per cent from the graduating class who attend college upon completion of high school.

2. The per cent attending college from the high school graduating class of an entering student does effect the first semester grade point average. This could be attributed to the effect the competition within a high school for grades, or rank, has on the student's ability to adjust to the type of program and higher standards an entrant is confronted with upon entering college.

FACTORS RELATED TO HOSPITAL RE-ADMISSION OF TUBERCULOSIS PATIENTS

--Richard E. Acciavatti

Statement of the Problem. The central problem of the investigation was to determine whether the histories of readmitted tuberculosis patients, during the interval between hospital discharge and re-admission, were consistent with accepted assumptions concerning factors related to relapse.

Procedure of the Investigation. The case study method was employed. Using the opinions of authorities in the various professional disciplines involved in the care of tuberculosis patients, an interview schedule was developed to investigate patients' perceptions of those behaviors which were judged to be contributory to tuberculosis relapse.

These interviews together with review of medical records and psychological testing were used to gather data concerning ninety-five patients at the Lawrence F. Flick State Hospital, Cresson, Pennsylvania, who had been admitted with a previous history of hospitalization for tuberculosis.

Conclusions. In the investigation of the assumptions, certain factors were found to be related to tuberculosis relapse. These factors were: inadequate diet; incomplete treatment due to leaving the hospital against medical advice; lack of follow-up treatment for non-tuberculosis medical conditions; de-socialization tendencies and lack of constructive use of leisure time.

In the investigation of the assumptions, other factors were not found to be significantly related to relapse. They are as follows: failure to take antituberculosis drugs; missing and being late for clinic appointments; excessive use of tobacco products and alcholic beverages; unsuccessful work experiences and hazardous working conditions; crowded home conditions; and serious problem with spouse and other members of the household.

It should be noted that the conclusions are based solely on the findings in this particular study and caution should be used in applying these findings without further research to test the validity of these conclusions as they would apply to another population.

INDIVIDUALIZATION OF PRE-MATRICULATION
PROGNOSIS OF COLLEGIATE ACADEMIC ACHIEVEMENT

--James H. Doverspike

The first step was the creation of the Academic Prognosis Inventory, a device to be used in collecting certain information concerning a number of non-intellectual factors which may be related to the individual's academic achievement. A template was also created to be used in scoring the Academic Prognosis Inventory for male and female students.

A reliability check of the instrument was performed which produced a coefficient of .92. The instrument was then subjected to a series of three preliminary trials and a final trial. Systematic random sampling was employed throughout and resulted in the following composition: trial one -- 93 males, 32 females; trial two -- 51 males, 36 females; trial three -- 109 males; final trial -- 242 males.

Using the Academic Prognosis Inventory resulted in slight improvement in prognosis of academic achievement for males students in two of the trials. In the case of female students, improvement in prognosis did not results in either the first or second preliminary trials, and therefore, the remainder of the trials were concerned with only males.

Improvement in prognosis resulted when using the sample of males students from a different size and type of educational institution. This suggests the possibility that prognosis of academic achievement may be related to the particular type of educational institution, and perhaps to the particular type of student body within the institution.

In general, while improvement in prognosis of academic achievement did occur in certain phases of the study, the amount of improvement was not sufficient to warrant the use of the Academic Prognosis Inventory.

EFFECTS OF STUDENT-CENTERED AND LEADER-PLANNED ORIENTATION UPON COLLEGIATE ADJUSTMENT OF CERTAIN MALE FRESHMEN AT THE PENNSYLVANIA STATE UNIVERSITY

--Daniel Raymond Leasure

One hundred-eighty beginning male freshmen with predicted grade-point average below 2.10 (2.00 being required for graduation at the University) volunteered to participate in a collegiate orientation.

First, the students were told that during the fall semester they would participate in a program which emphasized academic achievement in their collegiate adjustment. Then, while only 120 would be randomly selected to participate in this program, the other 60 could participate in a similar program during the spring semester.

The students were divided randomly into three groups of equal size: two experimental groups and one control group. Each experimental group was subsequently divided into three sub-groups of 20 which met for one hour during each of ten weeks of the fall semester. A student-centered experimental group (the Unstructured Group) discussed topics of immediate concern to them. Another experimental group (the Structured Group) received orientation preplanned by the author. Mostly, the material concerned study techniques for enhancing academic achievement. Students in the control group received no collegiate orientation in the author's program but could avail themselves of helping agencies on campus.

Conclusions: 1. By contrast with the control group, the greatest decrease of total problems on the Mooney Problem Check List post-experiment, was found in the experimental groups.

A comparison of each experimental group with the control group revealed in chi square value beyond the .01 level of significance. Although no significant difference was found between the experimental groups, the student-centered group revealed fewer problems post-experimentally.

2. Improvement in total score, when comparing pre- and post-experiment administrations of Brunn's Study-Habits Inventory, occurred in the experimental groups.

Differences in total score improvement, when comparing each experimental group with the control group, revealed a chi square value beyond the .001 level of significance. No significant difference existed between the two experimental groups, but each of these groups improve while the control group deteriorated.

3. That continuous orientation over the first semester enhances academic achievement seems to be shown by the results of both experimental groups in this study.

A distribution of predicted and actual grade-point averages shows that in the Unstructured Group, 23 percent were predicted to achieve 2.00 or higher, but 52 percent actually achieved 2.00 or above. In the Structured Group, 21 percent were predicted to achieve an average of 2.00 or greater, while 32 percent actually achieved at that level. Thirty one percent in the Control Group were predicted to achieve 2.00 or greater, but only 21 percent achieved 2.00 or above.

This study would seem to indicate that the student-centered method of orientation was superior to the leader-planned in enhancing academic achievement and that either method is far superior to no program of semester-end orientation.

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